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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,110	05/23/2000	Simon Robert Walmsley	PEC03US	9118
24011	7590	07/28/2004	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			LAMB, TWYLER MARIE	
			ART UNIT	PAPER NUMBER
			2622	
DATE MAILED: 07/28/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/575,110	WALMSLEY, SIMON ROBERT
	Examiner Twyler M. Lamb	Art Unit 2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 May 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 6-10 is/are rejected.
- 7) Claim(s) 2-5 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (US 5,805,178) in view of Harrington et al. (Harrington) (US 5,737,455).

With regard to claims 1, and 6-10, Silverbrook discloses a print engine/controller (Figure 4, head driver circuit) to drive an ink drop print head comprising: an interface at which to receive compressed page data (col 24, lines 12-44); decoders (decoder 405) to decode respective types of image planes in the received compressed page data (col 28, lines 5-20); and a half-toner/compositor to composite image plane data (col 33, lines 43-60).

Silverbrook differs from claim 1 in that he doesn't teach the half-toner/compositor including: a dot merger unit taking bits from the respective planes as inputs; and a color mask register holding masking bits in number equal to the number of image planes; respective input bits to the dot merger unit being ANDed with respective color mask register bits and the resultant bits Ored together to form an output bit in a channel for which there is an ink at the print head.

Harrington discloses an apparatus for combining antialiased edges that includes the half-toner/compositor including: a dot merger unit taking bits from the respective planes as inputs; and a color mask register holding masking bits in number equal to the number of image planes; respective input bits to the dot merger unit being ANDed with respective color mask register bits and the resultant bits Ored together to form an output bit in a channel for which there is an ink at the print head (col 7, line 25 – col 8, line 7).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Silverbrook to include the half-toner/compositor including: a dot merger unit taking bits from the respective planes as inputs; and a color mask register holding masking bits in number equal to the number of image planes; respective input bits to the dot merger unit being ANDed with respective color mask register bits and the resultant bits Ored together to form an output bit in a channel for which there is an ink at the print head as taught by Harrington. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Silverbrook by the teaching of Harrington to obtain the background pixel values as taught by Harrington in col 7, line 25 – col 8, line 7.

***Allowable Subject Matter***

3. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments filed 5/9/04 have been fully considered but they are not persuasive.
5. Applicant argues that Silverbrook and Harrington teach away from each other and could not be combined to result in the present invention as defined in claim 1.
6. Silverbrook and Harrington both deal with halftone or (greyscale) image processing and can therefore be combined.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Twyler Lamb whose telephone number is 703 - 308-8823. The examiner can normally be reached on M-TH (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-308-4712. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-6036 for regular communications and 703-872-9314 for After Final communications.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, DC 20231

or faxed to:

(703) 872-9314

(for informal or draft communications, such as proposed amendments to be discussed at an interview; please label such communications "PROPOSED" or "DRAFT")

or hand-carried to:

Crystal Park Two  
2121 Crystal Drive  
Arlington, VA.  
Sixth Floor (Receptionist)

Twyler Lamb



June 29, 2003